

Remarks

Applicants' attorney wishes to thank the Examiner for participating in an interview on May 21, 2004. Pursuant to your suggestion during the interview, Applicants hereby specify that the electrodes shown in figure 3 do not fall within the claims of the application. Also pursuant to the Examiner's suggestions, Applicants amended claims 4, 15, 22, 26, and 29 to remove trademarks. By specifying figure 3 is not within the claimed language, and by removing the trademarked language from the claims, Applicants submit the rejections under 35 USC 112 should be obviated.

The Examiner maintained his rejections of claims 23 and 25-32 under 35 USC 103 as being unpatentable over U.S. Patent 5,593,552 to Joshi in view of U.S. Patent 5,972,196 to Murphy.

Applicants' invention requires, among other elements, a coating deposited on a surface of an electrolytic material for reducing an amount of gas generated. As described in the background and detailed description of Applicants' application, uncontrolled bubble, or gas, formation from the electrode may negatively affect sensor sensitivity. The coating inhibits the flow of solution from the reservoir to the electrolytic material, which in turn hydrates the electrode, and where reducing the flow of solution may reduce bubble, or gas, formation. Therefore, the coating acts as a barrier between the reservoir and electrolytic material for regulating flooding by controlling the amount of solution in contact with the electrolytic material.

Applicants note that the combination of Joshi and Murphy is not being used to reject claims 1-22 and 24, which should now be allowed because the rejections with respect to 35 USC 112 are obviated.

With respect to claims 23 and 25-32, Applicants respectfully submit that the combination of Joshi and Murphy is improper. Alternatively, even if Joshi and Murphy were combined, the combination would not arrive at Applicants' claimed invention and there is no teaching or suggestion to modify the combination to arrive at a coating deposited on an electrolytic material for regulating an amount of gas generated in order to arrive at Applicants' claimed invention.

Joshi relates to a device for electrochemical generation of gas. Murphy relates to method for producing ozone and hydrogen peroxide for killing microorganisms. The fields of invention for Joshi and Murphy are clearly not related since killing microorganisms has nothing to do with electrochemically generating gas.

In order for a combination of references to be properly made under 35 USC 103, there must be some teaching or suggestion to make the suggested combination. There is no teaching in Murphy, a reference dealing with microorganisms, to be combined with Joshi, an invention for gas generation, and vice versa. Because Murphy and Joshi are in completely different fields of endeavor, one skilled in the art of gas generation would not consider a combination with a reference from the art of killing microorganisms. Likewise, one skilled in the art of killing microorganisms would not consider a combination with a reference from the art of gas generation. To make such a combination of references from different fields would be improper absent some teaching or suggestion to make the combination. As stated above, there is no such teaching or suggestion in either of the references to motivate one skilled in the arts to make the suggested combination.

Even if such a combination was made between Joshi and Murphy, no matter how improper, one skilled in the art would still not arrive at Applicants' invention. The resulting combination would be a gas generator having a catalyst layer 14, which

accelerates reactions between the other elements of the invention, such as the gas, solid electrolyte 12, and electrode 18 of Murphy. That is why catalyst layer 14 is defined to be an oxygen reduction electrocatalyst layer (col. 14, lines 1-5), where oxidation and reduction are known in the art to increase gas generation and where catalyst is defined (see select pages from Webster's Unabridged Dictionary 2002) to be an "acceleration of a reaction...an action or reaction between two or more persons or forces provoked or precipitated by a separate agent or force." The definition of regulate is "To reduce to order, method, or uniformity. To fix the time, amount, degree, or rate." See select pages from Webster's Unabridged Dictionary 2002. Hence, Murphy teaches away from Applicants' claimed invention by increasing gas generation whereas Applicants' coating reduces or fixes the amount, degree, or rate of flooding. Based on the foregoing, Applicants submit that the resulting combination, despite the improperness, does not arrive at Applicants' claimed invention. In fact, Murphy teaches away from Applicants' claimed coating.

For the combination to arrive at Applicants' claimed invention, the references need to be modified. For references to be properly modified in a rejection under 35 USC 103, there must be some teaching or suggestion in the references to make the suggested modifications.

Because Murphy does not teach or suggest a coating for regulating the amount of gas generated from an electrochemical gas generator, since Murphy relates to microorganisms and these are not pertinent to the field of electrochemical gas generators, there is no motivation for one skilled in the art to consider a coating for regulating the amount of gas generated from a gas generator. Further, because Joshi, as stated in the office action, does not recite a coating, there is no motivation for one skilled in the art to consider a coating of any kind, nevermind a coating for regulating

the amount of gas generated from a gas generator through a combination with a reference for killing microorganisms.

Based on the foregoing, Applicants respectfully submit that the combination of Joshi and Murphy is improper because both references lack the requisite teaching or suggestion to be combined with one another given that Murphy is in the field of killing microorganisms and Joshi is in the field of gas generation. Because of this, the rejections with respect to the combination of Joshi and Murphy should be withdrawn.

Respectfully submitted,



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catafalque 2

catal-lyst \ˈkɑd-ˌlɛst-, -əl-/\ *n* [fr. *catalysis*, prob. after
E analysis: *analysis*] 1 a substance that brings about
catalysis and that may or may not actually take part chemically
in the reaction; *broadly*: any substance (as an enzyme) that
initiates a reaction and enables it to take place under milder
conditions (as at a lower temperature) than in the absence
of the catalyst — compare **BIOCATALYST** 2 : an agent that
provokes or precipitates *biocatalysis* (the housing program is in-
tended to become the ~ of the new French economy — Ilde-
mond Taylor) (the major ~ in his writing life has been the
Mississippi countryside — H.W.Baker) (he was rumored to be
the ~ in a native uprising — C.H.Wind)
catal-ylite \ˈʔɑ-\ *n* [prob. back-formation fr. *catalytic*]
CATALYTIC
catal-ylitic \ˈkɑd-ˌlɪt-ik-, -it-ik-/ *adj* [*Gk katalytikos*, lit.
katalysis + *-ikos* *adj*]: causing, involving, or relating to
catalysis (a ~ agent) (a ~ reaction) (a ~ function) (a ~
personality) — *catalytically adv*
catalytic \ˈkɑ-\ *n* -s = **CATALYST** (duty is sometimes still offered
as a ~ Irwin Edman)
catalytic cracker *n*: the unit in a petroleum refinery in which
catalytic cracking is carried out — called also *cat cracker*
catalytic cracking *n*: cracking of petroleum oils (as gaso-
line or diesel oil) esp. for the production of high-octane gasoline
and the use of a catalyst (as bentonite clay) in various forms (as
pellets or beads either stationary in a fixed bed or moving
through the oil or as a fine powder fluidized by a stream of
air or hydrocarbon vapors) — distinguished from *thermal*
cracking
cat-a-lyze \ˈkɑ-tə-līz-/ *vt* -ED/-ING/-S [prob. fr. *F catalyser*, fr.
catalyse catalysis, fr. *E catalysis*] 1 : to bring about the cata-
lysis of (a chemical reaction); *specific* : to speed up (a chemical
reaction) 2 : to produce (a substance) by means of chemical
catalysis 3 : to bring about : PROVOKE, PRECIPITATE, INSPIRE
(religious faith which alone ~s important sacred art — James
Brown) 4 : to transform or alter significantly by catalysis
(innovations in basic chemical theory, that have: catalyzed
the field and its technology — *Newsweek*) (take over the pro-
letarian formula, revolution and all, and ~ it into one of the
epics of the twentieth century — Leo Gurko)
cat-a-lyzer \ˈkɑ-(r)-\ *n* -s = **CATALYST**
cat-a-maran \ˈkɑd-əm-ərən-, -ətə-, -ra-(ə)n/ *n* -s [modif.
Tamil *kaṭamaran*, fr. *kaṭtu* to tie + *maram* tree, timber] 1
: a raft or float consisting of two or more logs or pieces of
wood lashed together, propelled by paddles or sails, and used
for transport in shallow waters of the East Indies, the West
Indies, and So. America 2 : a boat with twin hulls and
planing surfaces side by side; *esp.* : a fast pleasure boat hav-
ing two hulls joined by a framework that supports the mast,
motor 3 : an early 19th century fire raft 4 : a raft consist-
ing of a rectangular platform attached to two parallel cylindri-
cal floats and is used in lifesaving or for work alongside a ship
6 : an ill-natured quarrelsome person; *esp.* : a faultfinder
woman
cat-an-me-nia \ˈkɑd-əm-ēnē-, -nyə/ *n* pl *but sing* or pl in con-
struction [NL, fr. Gk *katamenia*, neut. pl. of *katamēnos* monthly
cata- cata- + *mēn* month — more at MOON] : MENSES —
see *me-ni-al* \ˈmē-ni-āl-, -ni-əl/ *adj*
cat-a-mite \ˈkɑd-ˌmīt-, -kə-, usu -id- + V/ *n* -s [L *cataminis*,
fr. *Cataminus* Ganymede, cupbearer of the gods, fr. Etruscan
Catimite, fr. Gk *Katanmētēs*] : a boy kept for purposes of
sexual perversion
cat-am-ne-sis \ˈkɑd-əm-nēs-s/ *n*, pl *catamnē-ses* \-sēz/
[NL, fr. *cat-* + *mnēsis* memory (as in *anamnesis*)] : fol-
lowing the medical history of a patient — compare ANAMNE-
STIC
cat-am-no-tic \ˈkɑd-əm-nō-tik/ *adj*
catamorphaism var of CATAMORPHISM
cat-a-mount \ˈkɑd-ə-maunt/ *n* -s [short for cat-a-mount-
ed] : any of various wild animals of the cat family: as a COU-
gar b LYNX
cat-a-mountain \ˈkɑd-ə-maunt/ *n*, pl *cat-a-mountains*
cats-a-mountain [alter. of ME *cat of the mountains*] 1:
of various wild animals of the cat family: as a 2 : the European
wildcat b LEOPARD
cat-of-catapan \ˈkɑt-ə-pən/ *n* -s [Sp *catán*, fr. Jap. *kata-pan*,
a Japanese sword resembling a broad cut-throat sword]
cat-a-nan-che \ˈkɑ-d-ə-næŋ(k)-/ *n* [NL, modif. of *L catana*,
plant used in love potions, fr. Gk *katanankē*, lit., mean-
compulsion, fr. *kata-* cata- + *ananke* force, compulsion,
more at ANANKE] 1 *cap* : a genus of Mediterranean reeds
(family Compositae) having linear or lanceolate leaves creased
toward the base of the stem and ligulate blue or yellow fls
in long-stalked heads 2 -s : a plant of the genus *Catanan-
che* 3 : a cat-wisp of straw, perh. fr. *E cat*] 1 :
cat and clay worked together to form a building or chimney
material
cat-and-dog \ˈkɑt-ənd-ɒg/ 1 : resembling or having the charac-
ter of the proverbial antagonism of dogs and cats: a cat-and-
dog RELATIONSHIP (they led a cat-and-dog life together —
Ellen Glasgow) b of a flight; malicious and incessant
cat-and-dog fight among the early wire companies — F.L. Smith
2 : being or consisting of cheap or questionable securities;
highly speculative (*cat-and-dog* stocks are swinging their
sensational gyrations — rising 100 percent in ten days —
collapsing — Sylvia F. Porter)
cat-and-mouse \ˈkɑt-ənd-moʊs/ 1 : consisting of constant
ment prior to destruction or defeat (the cat-and-mouse
game of handling an opponent) 2 : consisting of com-
pursuit, near captures, and repeated escapes (a cat-and-mouse
kind of thriller with the hunter and the hunted playing
occasionally switching roles — Martin Levin) 3 : consisting
watchful waiting for the best opportunity to attack or strike
opponent (a cat-and-mouse mood)
cat and mouse or **cat and rat** \ˈkɑt-ənd-moʊz/ *n* : a children's
game in which players in a circle raise their joined hands to
player in and out of the circle and lower them to bar a peer
player who has chosen to be the cat
cat-a-nia \ˈkɑ-tīnē-, -tīn-/ *adj*, usu *cap* [fr. *Catania*,
Italy] : of or from the city of Catania, Italy : of the Sicilian
style prevalent in Catania
cat-a-pan \ˈkɑd-ə-pən/ *n* -s [ML *catapanus*, *catipanis*,
MGK *katapanos*, modif. of OIt *capitano* leader, commander,
fr. (assumed) VL *capitanus* foremost, chief, fr. L *capit-*,
head — more at HEAD] : the governor of Calabria and Sicily
under the Byzantine emperors
cat-a-phasi-a \ˈkɑd-ə-fāzh(ə)-/ *n* -s [NL, fr. *cata-* + *phasia*,
VERBIFICATION
cat-a-phor-ic \ˈkɑd-ə-fōr-əs/ *n*, pl *cataphores-es* \-sēz/
[NL, *cata-* cataphora] : ELECTROPHORESIS (OAT-
ret-ic \ˈoʊ-ret-ik/ *adj*) **cat-a-pho-ret-i-cal-ly** \ˈkɑd-ə-fōr-
et-ik-lee/ *adv*
cat-a-phor-ic \ˈkɑd-ə-fōrik/ *adj* [*Gk kataphorein* to transfer
down, wash downstream (fr. *kata-* cata- + *pherein* to carry,
freq. of *pherein* + *E -ic*): of or relating to cataphoresis]
cat-a-phract \ˈkɑd-ə-frakt/ *n* -s [L *cataphractes*, fr.
kataphraktes, fr. *kataphraktos* covered, armored, fr. *phrassein*
to protect, fortify, fr. *kata-* cata- + *phras-* phras-
close (more at FARCE)] 1 : a suit of armor for the
cataphract : COA or MAIL 2 [L *cataphractus*, lit., armored]
cataphract : a soldier wearing a cataphract's armor
cat-a-phrac-ta \ˈkɑ-tə-/\ *n* pl, *cap* [NL, fr. L, post-classical
cataphractus armored] in former classification

a strophe and an antistrophe of identical and an epode of contrasting form

regular peloria *n* : peloria in which symmetry is attained by regularity in the number of normally irregular parts ~ compare **IRREGULAR PELORIA**

regular pyramid *n* : a pyramid whose base is a regular polygon and whose vertex is on the perpendicular to the base through its center

regular reflection *n* : reflection such that the angle of reflection of the light is equal to the angle of incidence and on the opposite side of the normal to the point of incidence

regulars *pl* of **REGULAR**

regular sequence *n* : a sequence possessing a limit : a convergent sequence

regular solid *n* : any of five regular polyhedrons : a regular tetrahedron, hexahedron, octahedron, dodecahedron, or icosahedron

regular year *n* : a common year of 354 days or a leap year of 384 days in the Jewish calendar - see **YEAR** table

reg-u-lat-able \ˈregy,liəd-əbəl, -lī-tə-, -sə-ˈsəl-*adj* : capable of being regulated

reg-u-late \ˈrɛg-jl-, -səl-*vd* -ED/-ING-/**LL** *regulatus* past part. of *regulare*, fr. *L* *regula* straightedge, rule - more **RULE** *vt* 1 : to govern or direct according to rule (laws which ~ the succession of seasons); *usu* : to bring under the control ~ law or constituted authority : make regulations for or concerning (the industries of a country) 2 a : to reduce to order, method, or uniformity 1 **REGULIZE** (< one's habits) **b** **obs** : **DISCIPLINE** 3 : to fix the time, amount, degree, or rate of (as by adjusting, rectifying) (< the pressure of a tire); also : to adjust so as to work accurately or regularly (< a clock) ~ *vi* : to make regulations

regulated company *n* : a mercantile association holding by government charter exclusive trading rights with specified lands and combining freedom for the individual to trade on his own capital with regulations limiting trade in order to keep up prices

regulating box *n* : a rheostat for regulating the electric current passing through the field-magnet coils (as of a dynamo)

regulating station *n* : a military command agency that controls all movements of personnel and supplies into and out of a given area

reg-u-la-tion \ˈrɛg-jl-ə-shən-*n* **s** [*regulate* + *-ion*] 1 : an act of regulating or the condition of being regulated (< the ~ of her mind) (business suffering from undue ~) 2 a : an authoritative rule or principle dealing with details of procedure; *esp* : one intended to promote safety and efficiency (as in a cooking theory) *b* : a rule or order having the force of law issued by an executive authority of a government *c* : an order under power granted by a constitution or delegated by legislation : as (1) : a piece of subordinate legislation issued by a British administrative unit under the authority and subject to the veto of parliament - compare **PROVISIONAL ORDER**, **STATUTORY ORDER** (2) : one issued by the president of the U. S. or by an authorized subordinate - called also *executive order* (3) : an administrative order issued by an executive department or a regulatory commission of the U. S. government *d* : an act or principle implementing broad expressional legislative enactment 3 : the percentage variation in some characteristic quantity (as voltage) as a machine or apparatus becomes loaded; *also* : the ratio of deviation of such a quantity at rated load to its normal value at no load 4 a : redistribution of material (as in an embryo) to restore a damaged or lost part independent of new tissue growth - compare **REGENERATION** *b* : the mechanism by which an early embryo maintains essentially normal development in the face of abnormal con-regulation **DETERMINATION** *syn* see **LAW**

2 **regulation** \ˈrɛg-jl-ə-*n* **s** [*regulate* + *-ion*] *adj* : prescribed by or being in accord with regulations (the ~ cap of a nurse); *broadly* : **USUAL**, **CUSTOMARY** (the ~ accompaniments of a Thanksgiving dinner)

reg-u-la-tive \ˈrɛg-jl-ə-tiv-, -lə-, [l], -jēv *also* [əv] *adj* 1 : tending to regulate : having regulating as an aim (< a ~ statute) 2 a : directing or regulating in the manner of a rule to be followed or an end to be attained - compare **REGULATIVE PRINCIPLE** *b* : constituting in Kantianism the ideas of reason (as First Cause) that arise in the mind because ideal knowledge requires the conception of the totality of conditions for anything to be as conditioned - contrasted with **constitutive** 3 : capable of regulation : involving progressive determination and restriction of initially totipotent material - used of a developing zygote or its state; compare **MOSAIC**

2 **regulative** \ˈrɛg-jl-*n* **s** : something (as a principle or enactment) that has regulative force

reg-u-la-tive-ly \jəv-, -lī-*adv* : in a regulative manner : so as to be regulative

regulative principle *n* : a rule or principle of procedure : as (1) : the principle underlying systematic inference or inference in accordance with a method (2) : a rule of inference as drawn *b* : a rule of procedure to which there is no alternative if the desired end is to be secured although it cannot itself assure attainment

reg-u-la-tor \ˈrɛg-jl-ə-t(ə)r-, -lī-tə-*n* **s** : one that regulates : as a (1) : one of a board of seven appointed by King James II in 1687 with powers to appoint and remove officers and freemen at their discretion for the purpose of influencing the election of members of Parliament (2) *usu* *cap* : a member of any of various associations of the poorer people in No. Carolina existing from 1767 to 1771 formed to resist official extortion, refusing to pay taxes, and committing many deeds of violence (3) : a member of any of various bands or volunteer committees in the U.S. formed in newly occupied or settled regions before the establishment of local government to preserve order, prevent crime, and administer justice *b* (1) : a person who regulates mechanisms (as clocks) or conditions (as of traffic) (2) : a worker who hangs or bolts up ship plates on the frame of a ship *c* (1) : an automatic device for maintaining the current, voltage, speed, or other quality of various associated mechanisms (as of a power plant) (2) : a device at a specified value or for adjusting these quantities at will (2) : a lever or index in a watch for altering the effective length of the hairspring to make the watch go faster or slower (3) : an accurate master clock used for timing watches and clocks - compare **ASTRONOMICAL CLOCK** (4) : **GOVERNOR** 4b (5) : a sliding door for controlling ventilation in a mine (6) : a balance valve for controlling the admission of steam to the steam chest in a locomotive (7) : a reducing valve or steam-pressure regulating device (8) *Brit* : a throttle on a locomotive *d* (1) : a substance added in a reaction to regulate the amount of a substance formed (2) : **GROWTH REGULATOR** (3) : **PLANT REGULATOR**

regulator pin *n* : either of two short upright thin cylindrical pins that are fitted in a watch regulator bearing or banking the hairspring in such a manner that moving the regulator into a position in which the pins touch the hairspring closer to its center shortens the spring and causes the watch to run faster

reg-u-la-to-ry \ˈrɛg-jl-ə-tōr-, -tōr-, -rī-*adj* 1 : of or relating to regulation : making or concerned with the making of regulations : **REGULATIVE** (< measure of a local ~ body) 2 : substitutions or modifications of procedure that are considered dangerous and may be shipped only under stipulated conditions of packaging, labeling, and handling)

reg-u-line \ˈregy,lin-, -lən-*adj* [*prob.* fr. (assumed) *NL regulinus*, fr. *RL* *regulus* + *L* *inus* -ive] : of, relating to, or